

FARMERS' PROVISION OF FEEDBACK ON FISHERY TECHNOLOGIES IN EPE LOCAL GOVERNMENT AREA OF LAGOS STATE.

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ABSTRACT

The rapid increase in world population has resulted in a huge increase in the need for animal protein and other nutritional requirement. Fish farmers' face a series of constraints that contribute to their marginal production and the foregoing problems led to the development of fisheries technologies by researchers for onward transmission to the farmers by the extension agents. Technology development process is describe as one that is participatory because it involves end users helping to ensure that research is demand driven rather than supply.

Farmers' participation implies an acceptance that local people can to a large extent identify and modify their own solutions to suit their needs. With the support of the researchers and development agents to assist the farmers in their own effort to change their farming system hence it is a combination of activities. The routine monitoring and collection of data on the farmers' situations thus give rise to feedback of different types.

Feedback is a way of overcoming the gap between the farmers and research. It is the pattern of relating information from farmers back to the researchers after having received or adopted the innovations earlier disseminated to them.

The study was carried out in Epe local government area of Lagos state. A well structured interview schedule was administered to a sample of 110 fish farmers randomly selected in the study area. Data was analyzed using both descriptive and inferential statistical tools such as frequency counts, percentages and correlation.

Considering the age of the respondents, it was clear that majority of the respondents are middle aged and would therefore posses the vitality for providing feedback on fishery technology likewise most of the respondents are educated which favours feedback provision. Also, majority of the sampled respondents engage in fish farming as an occupation.

Analysis performed on the variables shows that there was a strong correlation between channel of feedback and provision of feedback on fishery technology ($r = 0.690$). This implies that the better the channel of feedback, the more the respondents reacts (provide feedback) on fishery technologies.

KEYWORDS: Feedback, Feedback channels, Fishery, Fish demand, Technology, Innovation,

INTRODUCTION

The rapid increase in world population has resulted in a huge increase in the need for animal protein and other nutritional requirements. This is particularly crucial in developing countries like Nigeria where there is widening gap between supply and demand of fish leading to the large scale fish importation. As stated by FAO (1991), fish provides roughly 40% of the protein intake for nearly 2/3 of the world's human population.

Consequently, the fish industry in Nigeria is an important component of the agricultural sector. The biological role of fisheries is largely nutritional as in the case of livestock, it helps to sustain the chemical protein, fat, calcium, iron, vitamins and the essential amino acids contents of the body. Also, protein from animals e.g fish are more nutritious and better utilized by the body than those from plant foods (George, 1992). From socio-economic point of view, fisheries make significant contribution to rural economics in terms of income, employment opportunities, cottage processing of fish into fish oil and provision of fish markets. Nigeria's total fish production accounts for 6.1% of African's total catch and 0.32% of the world's fish harvest (FAO, 1991). Nigeria also obtain foreign exchange from the export of fin fish and shell fish, for instance the annual foreign exchange from shrimp stands at about 200 million dollars. The Nigerian fisheries sub-sector consist of artisanal industry and aquaculture.

Artisanal consist of small scale fishermen that make use of canoes and out board engine while in industrial sector, large trawlers and highly specialized fishing gears are used and aquaculture on the other hand involves the rational rearing of fish and other aquatic organisms in man-made ponds, reservoirs, cages or other enclosure in lakes and coastal water bodies (Youdeowei *et al*, 1995). Fishermen faces series of difficulties that contribute to their marginal production. Government fishery policies often tend to concentrate resources in the modern, large-scale, commercial fisheries that earn foreign exchange, thus the small scale fishermen finds it difficult or impossible to obtain credit, extension services, marketing assistance from development programmes.

The foregoing constraints led to the development of fisheries technologies by researchers and disseminated by extension agents. The technology development process is described as one that will be participatory, involving users helping to ensure that research is demand driven rather than supply. Also, that this reversal is essential if applied research is to produce the technologies required to fuel agricultural development. Farmers' participation implies an acceptance that local people can to a large extent identify problems and modify their own solutions to suit their needs whereby outsiders such as researchers and development agents support farmers in their own effort to change their farming system, hence the process is a combination of activities and recognizing the important role of farmers of farmers in generating and communicating innovations. Therefore, routine monitoring and collection of data on farmers circumstances thus gives rise to different forms of feedback (Biggs 1989).

Feedback is a way of overcoming the gap between farmers and research. It is a pattern of relating information from farmers back to the researcher after having received or adopted the innovation earlier disseminated to them. Also, feedback helps to understand the different constraints to participation faced by men and women and the current strategies needed to ensure further participation of both. Moreso, feedback is important because farmers relay their views on certain conditions of their farm either of the innovation introduced to them if applicable or not. It is presumed that the last stage of communication on technology transfer process is feedback and it is important for equity and efficient consideration. Also, it gives the opportunity for strengthening farmers participation in setting the agenda for the future.

Similarly, fisheries development programme of the various levels of government in the past failed to make the desired impact on fish production because their design and implementation lacked adequate extension support. The description of the technology transfer process is a misleading metaphor because farmers non-adoption and abandon adoption of technologies have been ascribed to the failure of farmers to appreciate the benefits of such technology and the bottleneck in the technology transfer process. Farmers are seen as passive users of technologies and technology has been thought of as a single uniform product that is generated by researchers and flow downstream to farmers in a one way linear process hence farmers' reaction on technologies in form of feedback are often neglected.

Moreover, feedback been the most important stage of the process of communication whereby the extension agents really evaluate their message whether adopted or abandon by the farmers therefore a proper understanding and orientation of the concept of feedback from the farmers to the extension agents and researchers should not be neglect. In view of this, the study intends to analyse the farmers provision of feedback on fishery technology, identify the demographic characteristics of the respondents and to identify the types of feedback given by the respondents and its frequency of use. It was also hypothesized that no significant relationship exists between feedback channels and feedback provision on fishery technology.

METHODOLOGY

The study was conducted in Epe Local Government Area of Lagos. It lies approximately 40km north of Lagos State and it is located between longitude $2^{\circ} 0^{\circ}$ and $4^{\circ} 30^{\circ}$ east and latitude $6^{\circ} 20^{\circ}$ and $6^{\circ} 40^{\circ}$ of the equator. Conveniently, it can be concluded that Epe Local Government Area of Lagos State is one of the major areas where Lagos state get her food supply due to different agricultural practice like crop production, livestock production and fisheries which are the order of the day in the local government area.

Epe Local Government Area of Lagos State is well known for its bubbling fishing activities because of its numerous water bodies and its fishing villages includes; Erepoto, Ebute Afuye, Okorisan and Igboye. The

population of study consists of all farmers involved in fish production in the study area both males and females. The list of farmers involved in fish production was provided by the zonal office of the Lagos State ADP and below are the numbers of fish farmers in the area that constituted the study area.

Erepoto	20
Ebute Afuye	74
Okorisan	30
Igboye	05
Total	<u>129</u>

Eight-five percent of the total fish farmers' population constituted the sample size thus

Erepoto	20
Ebute Afuye	60
Okorisan	25
Igboye	05
Total	<u>110</u>

Primary data was used for the study. It was collected with the aid of structured interview schedule. Descriptive statistics like frequency and percentage was used in measuring some selected variables while the inferential statistic used to test the hypothesis was Pearson Product Moment Correlation (PPMC). The dependent variable was provision of feedback on fishery technology which was measured by type of feedback and scored accordingly.

RESULTS AND DISCUSSION

Demographic characteristics of the respondents

Table 1 shows the age of fish farmers ranges from 21-67 years. Most of the farmers involved in fish production are below the age of 30years (56.4%). This implies that they are middle aged and hence possess vitality for fish farming activities because they will be more adventurous and hence can take risk unlike other farmers who are so committed to the conventional agricultural practice. The table further reveals that 86.4% of the total respondents sampled were male while the remaining 13.6% were female. This implies that men are the one who tend to engage in fish farming mostly while their female counterparts are mostly involved in processing and other post harvesting activities. Also, less female involvement in fish farming can be attributed to time spent on other activities especially household chores and caring for the children.

Marital status influences certain decisions in agriculture and compliment labour availability. It can be observed on the table that 28.7% of the sampled respondents are single while the highest percentage accounted for married respondents (43.6%) and 13.9% were widowed. This indicates that the married have extra hands to work with on their farms hence can embark on more farming activities. Most of the farmers involved in fish farming belong to one social group or the other. Forty-three percent of the respondents belong to one social group or the other while 34.8% accounted for those respondents who do not belong to any social association.

Similarly, majority of the respondents (56.4%) are educated which is expected to favour feedback provision while 26.1% accounted for those respondents who have no formal education. This is in line with Ogunfiditimi (1981) that a positive and significant correlation exists between literary level and farmers' use of recommended practices. It could also be seen that majority of the fish farmers in the study area (58.2%) engage in fishing as their primary occupation while the remaining 41.8% engage in fishing as their secondary occupation. These respondents practice fishing mostly because their areas lie within a riverine lakes and reservoirs which contributed immensely to fishing in the study area.

Data presented on Table 2 shows that 25.2% of the respondents regularly provided question asking as suitable type of feedback use while 11.3% rarely provided this as suitable for their use. Also, 21.7% of the sampled respondents regularly provided the use of observation as their type of feedback while 17.4% accounted for those respondents who rarely thought of observation as their type of feedback use. Moreso, 21.7% of respondents regularly provided

suggestion as their type of feedback use while the remaining 14.8% of the respondents rarely provided suggestion as their type of feedback usage, likewise 21.7% of the respondents regularly provide criticism as their type of feedback use while 7.8% rarely required criticism as their feedback type.

Further analysis reveals that 18.3% of the farmers involved in fish production provided commendation as their regular type of feedback use and 13.9% of the fish farmers rarely accept thus as their feedback use. Twenty percent of the respondents provided advice as their regular type of feedback use while 7.8% rarely accepted thus as their type of feedback use. It can therefore be seen from the table that question is greatly provided as a type of feedback use while commendation was least provided as type of feedback use.

It could be observed from Table 3 that 31.8% of the respondents provided feedback through mass media channels while 68.2% uses Extension Agents as channel to provide feedback. This implies that majority of the respondents make use of Extension Agents to express their reactions towards fishery technologies passed across to them.

Hypothesis testing

Data presented on Table 4 shows that the channel of feedback used exhibit a larger r value of 0.690 at $P < 0.05$ which indicate a strong correlation between the channel of feedback used and Provision of feedback on fishery technology. This implies that the better the channel of feedback, the more the respondents reacts (provide feedback) on fishery technologies.

CONCLUSIONS AND RECOMMENDATIONS

Feedback been the most important stage in communication whereby the extensionist evaluated his message whether adopted or abandoned, based on the findings of the study, it can be concluded that;

1. Age of farmers involved in fish farming influences feedback provisions.
2. The respondents' level of education has a positive influence in the provision of feedback.
3. Most of the respondents directed their feedback on fishery technologies to the extensionist inform of question as the type of feedback used.
4. Feedback channel and type of feedback used has a positive influence on feedback provision on fisheries technologies.

RECOMMENDATIONS

Based on the findings of the study, it can be recommended that;

1. Feedback mechanism should be inculcated into technology transfer system as this is a measure of evaluating the transfer and adoption of innovation.
2. Extension agents should ensure more regular and adequate visit to fish farmers so that they would be able to transfer more improved technology and obtain the feedback from the farmers.

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Table 1: Frequency distribution and percentage of respondents according to demographic characteristics

Demographic characteristics	Frequency	Percentage
Age (Years)		
Less than 30	62	56.4
30-40	14	12.7
41-50	01	0.9
51 and above	33	30.0
Gender		
Male	95	86.4
Female	15	13.6
Marital status		
Single	33	30.0
Married	48	43.7
Divorced	16	14.0
Widowed	06	5.5
No response	08	7.3
Social group		
Yes	50	45.4
No	40	36.4
No response	20	18.2
Level of education		
No formal education	30	27.3
Adult education	05	4.5
Primary education	25	22.8
Secondary education	20	18.2
Tertiary education	10	9.1
Others	15	13.6
No response	05	4.5
Primary occupation		
Fishing	64	58.2
Non-fishing	46	41.8

Source: Field Survey, 2009.

Table 2: Distribution of respondents according to feedback type and its frequency of usage

Type of feedback	Frequency of use			
	Regularly	Occasionally	Rarely	No response
Advice	23*(20.0)	40(34.8)	9(7.8)	38(34.5)
Criticism	25(21.7)	37(32.2)	9(7.8)	39(35.5)
Commendation	21(18.3)	40(34.8)	16(13.9)	33(30.0)
Suggestion	25(21.7)	46(40.0)	17(14.8)	22(20.0)
Question	29(25.2)	44(38.3)	13(11.3)	24(21.8)
Observation	25(21.7)	44(38.3)	20(17.4)	21(19.0)
Others	26*(22.6)	50(43.5)	20(17.4)	14(12.7)

* Percentage in parenthesis.

Source: Field Survey, 2009.

Table 3: Distribution of respondents according to feedback channels

Feedback channels	Frequency	Percentage
Mass media through (telephone programmes on radio and TV)	35	31.8
Extension Agent	75	68.2

Source: Field Survey, 2009.

Table 4: Correlation analysis of the relationship between feedback channel and the provision of feedback on fishery technology

Variable	Correlation value (r)	Significance ratio	Decision
Channel of feedback	0.690	0.385	Significant

Source: Field Survey, 2009.

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